Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An instrumented prosthetic foot for use with an actuated leg prosthesis controlled by a controller, the instrumented prosthetic foot comprising:

An elongated body having a top and a bottom part;

a connector to connect the instrumented prosthetic foot to the leg prosthesis~~, the connector being attached to the top part of the elongated body~~; and

~~a ground engaging member attached to the bottom part of the elongated body;~~

at least one sensor ~~for detecting~~ positioned between the connector and the top part of the elongated body; the at least one sensor transmitting signals indicative of changes in weight distribution along the foot to the controller; [and]

~~an interface for transmitting signals from the sensor to the controller;~~

wherein in operation the at least one sensor is the only element interposed between the connector and the top part of the elongated body.

2. (Currently amended) An instrumented prosthetic foot according to claim 1, wherein:

the ~~ground engaging member~~ bottom part of the elongated body includes a pair of basic underfoot locations, the first region corresponding to the heel area of the human foot and second region corresponding to the toe area of the human foot.

3. (Currently amended) An instrumented prosthetic foot according to claim 2, wherein:

at least two sensors are provided, one of the sensors being associated with each basic underfoot locations of the ~~ground engaging member~~ elongated body.

4. (Withdrawn) An instrumented prosthetic foot according to claim 3, wherein:

the sensors include a strain sensor to measure the strain applied at a corresponding basic underfoot location of the ground engaging member.

5. (Withdrawn) An instrumented prosthetic foot according to claim 3, wherein:

the sensors include a pressure sensor to measure the pressure applied at a corresponding basic underfoot location of the ground engaging member.

6. (Currently amended) An instrumented prosthetic foot according to claim 3, wherein:

the sensors ~~include a load cell to measure the pressure applied at the~~ associated with each basic underfoot locations of the ~~ground engaging member~~ elongated body are load cells.

7. (Withdrawn) An instrumented prosthetic foot according to claim 3, wherein:

the sensors are positioned under the ground engaging member.

8. (Withdrawn) An instrumented prosthetic foot according to claim 3, wherein:

the sensors are positioned between the ground engaging member and the elongated body.

9. (Canceled)

10. (Withdrawn) An instrumented prosthetic foot according to claim 5, wherein:

the pressure sensor is a force-sensing resistor.

11. (Withdrawn) An instrumented prosthetic foot according to claim 5, wherein:

a rigid plate placed on at least one side of the sensor.

12. (Withdrawn) An instrumented prosthetic foot according to claim 11, wherein:

a resilient pad covering the rigid plate and the sensor.

13. (Withdrawn) An instrumented prosthetic foot according to claim 1, wherein:

an ankle structure pivotally connecting the elongated body to the connector.

14. (Withdrawn) An instrumented prosthetic foot according to claim 13, wherein:

at least two sensors are provided, the sensors including two load cells positioned between the connector and the ankle structure.

15. (Withdrawn) An instrumented prosthetic foot according to claim 13, wherein:

at least two sensors are provided, the sensors including an optical encoder and a load cell, the optical encoder being positioned on the ankle structure about its pivot axis with the elongated body and the load cell being positioned between the ankle structure and the connector.

16. (Currently amended) An instrumented prosthetic foot according to claim 1, wherein:

the ~~interface for transmitting~~ at least one sensor transmits signals ~~from the sensor~~ to the controller [is] using a wired connection.

17. (Currently amended) An instrumented prosthetic foot according to claim 1, wherein:

the ~~interface for transmitting~~ at least one sensor transmits signals ~~from the sensor~~ to the controller [is] using a wireless connection.

18. (Original) An instrumented prosthetic foot according to claim 1, wherein:

the connector removably connects the instrumented prosthetic foot to the leg prosthesis.

19. (New) An instrumented prosthetic foot according to claim 3, wherein:

the first and second sensors are positioned side by side, the first sensor being generally biased towards the heel region of the elongated body and the second sensor being generally biased towards the toe region of the elongated body.

20. (New)An instrumented prosthetic foot according to claim 1, wherein:

the at least one sensor transmits signals to the controller using an optical interface.

21. (New) An instrumented prosthetic foot according to claim 1, wherein:

the at least one sensor includes a load cell.

22. (New) An instrumented prosthetic foot according to claim 1, wherein:

the at least one sensor includes a strain gauge.

23. (New) An instrumented prosthetic foot according to claim 1, wherein:

the at least one sensor includes a pressure sensor.

24. (New) An instrumented prosthetic foot according to claim 1, wherein:

the at least one sensor includes a force sensing resistor.